

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A battery charge system for a vehicle, including:
a controller that detects a charging session where a battery in the vehicle is charged by an external battery charger, the controller upon detecting the charging session automatically activating a fan located in the vehicle for cooling the battery during the charging session, wherein the fan continues to cool the battery after the charging session is completed.

2. (Canceled)

3. (Currently Amended) ~~A~~The system according to claim 1 including an interlock switch that connects the battery charger to ~~the~~ a fan circuit or connects the battery to the fan circuit during the charging session.

4. (Currently Amended) ~~A~~The system according to claim 3 wherein the interlock switch ~~disconnects other electric equipment in the vehicle from the battery during the charging session and reconnects the other electric equipment back to the battery when the charging session is completed~~ connects the battery charger to the fan circuit during the charging session and connects the battery to the fan circuit after the charging session.

5. (Currently Amended) ~~A~~The system according to claim 3 including a filter coupled between the interlock switch and the fan that filters large charge surges from the battery charger from reaching the fan.

6. (Currently Amended) ~~A~~The system according to claim 1 including a battery monitor that monitors battery parametric information, the battery monitor or the controller activating the fan when the charging session is detected and the battery monitor controlling the charging session with the battery charger according to a reduced battery temperature provided by the fan and according to a battery charging history profile.

7. (Currently Amended) ~~A~~The system according to claim 6 wherein the controller monitors and stores vehicle operational data and then downloads the stored data to the battery monitor, the battery monitor then sending the data through a cable coupled between the battery monitor and the battery charger to a computer coupled to the battery charger.

8. (Currently Amended) ~~A~~The system according to claim 1 wherein the controller predicts an amount of remaining vehicle operating time according to both battery charge information and vehicle operating parameters.

9. (Currently Amended) ~~A~~The system according to claim 8 wherein the controller monitors and stores a profile of vehicle operation and adjusts the predicted amount of remaining vehicle operating time according to the vehicle operation profile.

10. (Currently Amended) ~~A~~The system according to claim 9 wherein the controller predicts a duration of an upcoming vehicle operating session, predicts whether or not the battery has enough charge to operate the vehicle for the predicted duration, and displays results of the predictions.

11. (Original) A method for charging a battery, comprising:
detecting a charging session where a battery charger starts charging a battery located in a vehicle; and
automatically activating a fan in the vehicle to blow air on the battery when the charging session is detected, whereby the fan continues to blow air on the battery after the charging session is completed.

12. (Canceled)

13. (Original) The method according to claim 11 including automatically directing energy from the battery charger to the fan and disconnecting other electrical equipment in the vehicle from the battery when the charging session is detected.

14. (Original) The method according to claim 13 including connecting the battery charger to the fan during the charging session, disconnecting the battery charger from the fan at the completion of the charging session, and connecting the battery to the fan at the completion of the charging session to remove residual heat from the battery after the battery charger has been shut-off.

15. (Currently Amended) The method according to claim 11 including:
monitoring an operating parameters temperature of the battery;
maintaining a usage history for the battery; and ~~activating the fan~~
controlling the charging session and operation of the fan according to the monitored ~~battery operating parameters~~ temperature and the usage history.

16. (Original) The method according to claim 11 including monitoring vehicle operation parameters and downloading the monitored vehicle operation parameters through the battery charger to a computer.

17. (Original) The method according to claim 11 including:
generating a vehicle operation profile identifying when and how long an electric motor in the vehicle is activated by the battery;
monitoring an amount of charge remaining in the battery; and
predicting an amount of time the battery can continue to operate the electric motor according to the monitored operation history and the monitored battery charge.

18. (Original) A method according to claim 11 including:
tracking past battery discharge rates while the battery is operating an electric motor in the vehicle;
measuring a charge remaining in the battery; and
predicting an amount of time the battery can operate the electric motor according to the tracked past battery discharge rates and the measured remaining charge in the battery.

19. (Currently Amended) A battery charging system for a vehicle, comprising:
a battery located in the vehicle for powering an one or more electric-motor motors used for locomotion or other functions of in the vehicle;
a fan permanently installed in the vehicle and directed toward the battery;
a battery charger; and
a controller automatically activating the fan when the battery charger initiates charging of the battery.

20. (Currently Amended) ~~A~~The battery charging system according to claim 19 including switching circuitry in the vehicle that automatically maintains or connects power from the battery-~~charges~~ charger to the fan and automatically disconnects power from the battery charger from other vehicle electrical equipment while the battery charger charges the battery.

21. (New) The system according to claim 8 wherein the vehicle operating parameters include a number of vehicle sessions, a time period of the vehicle sessions, and a time period of non-use between the vehicle sessions.

22. (New) The method according to claim 11 including measuring an impedance across one or more electric motors.

23. (New) The method according to claim 22 including:
monitoring an amount of charge remaining in the battery; and
predicting an amount of time the battery can operate the one or more electric motors according to the remaining battery charge and measured impedance.

24. (New) A method for determining power source life including:
generating a vehicle operation profile identifying time periods of vehicle operating use and non-use;
monitoring an amount of energy remaining in a power source; and
predicting an amount of time the power source can continue to power one or more electric motors according to the vehicle operation profile and the monitored power source life.

25. (New) The method according to claim 24 including monitoring an electric motor energy consumption rate to predict power source performance.

26. (New) The method according to claim 24 whereby the vehicle operation profile includes monitored electric motor load factors over time.

27. (New) The method according to claim 24 including measuring ambient temperature to predict power source performance.

28. (New) The method according to claim 24 whereby the one or more electric motors provide power for a traction system, a steering system, or a lifting system.

29. (New) The method according to claim 24 whereby the vehicle operation profile is modified or preset in a look-up table.